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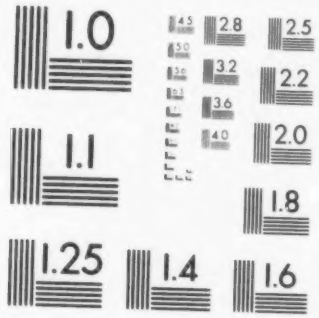

PRECISION[SM] RESOLUTION TARGETS

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS
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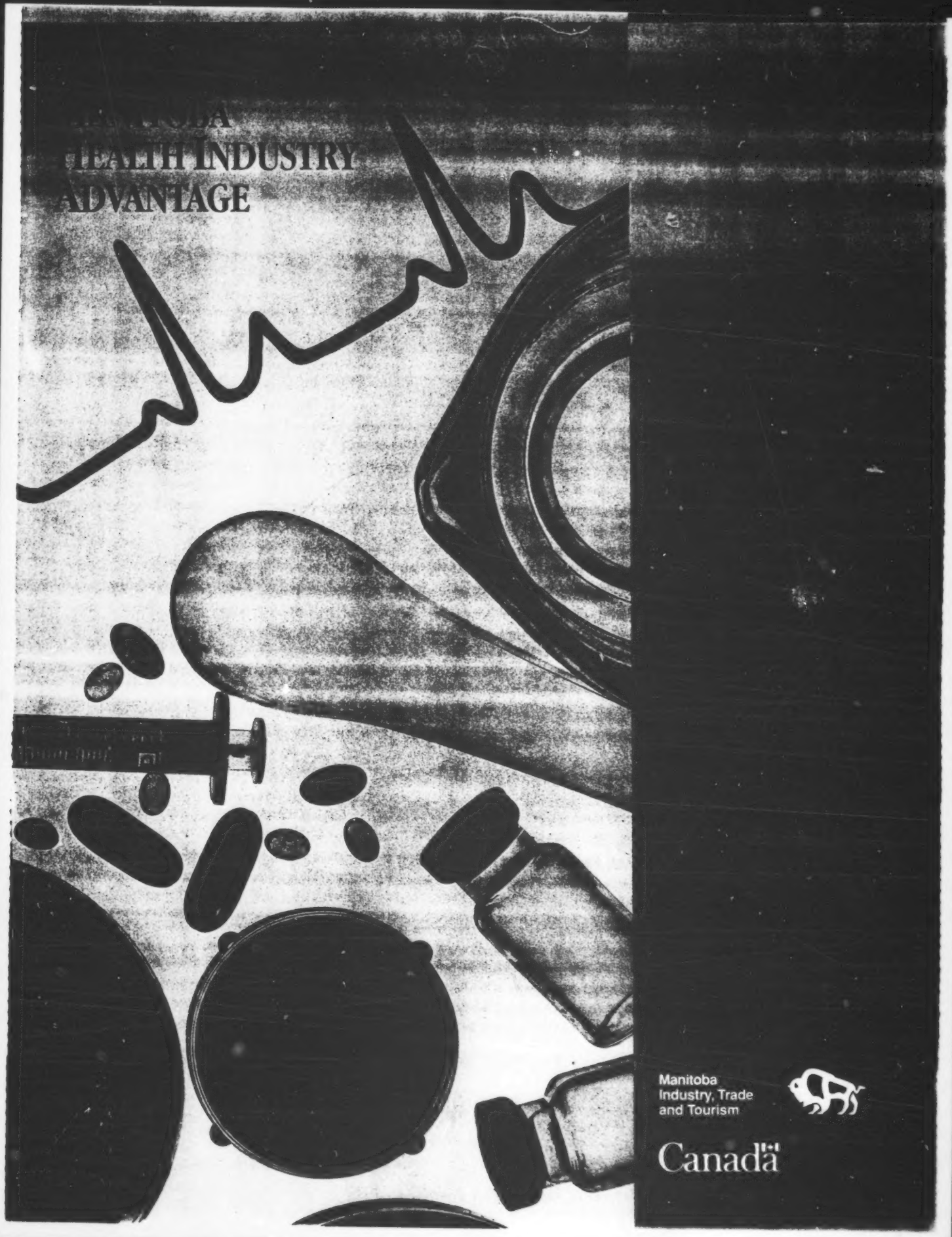

ADVANTAGE
Manitoba
Industry, Trade
and Tourism
Canada

91-01561/

DISCOVER THE ADVANTAGE

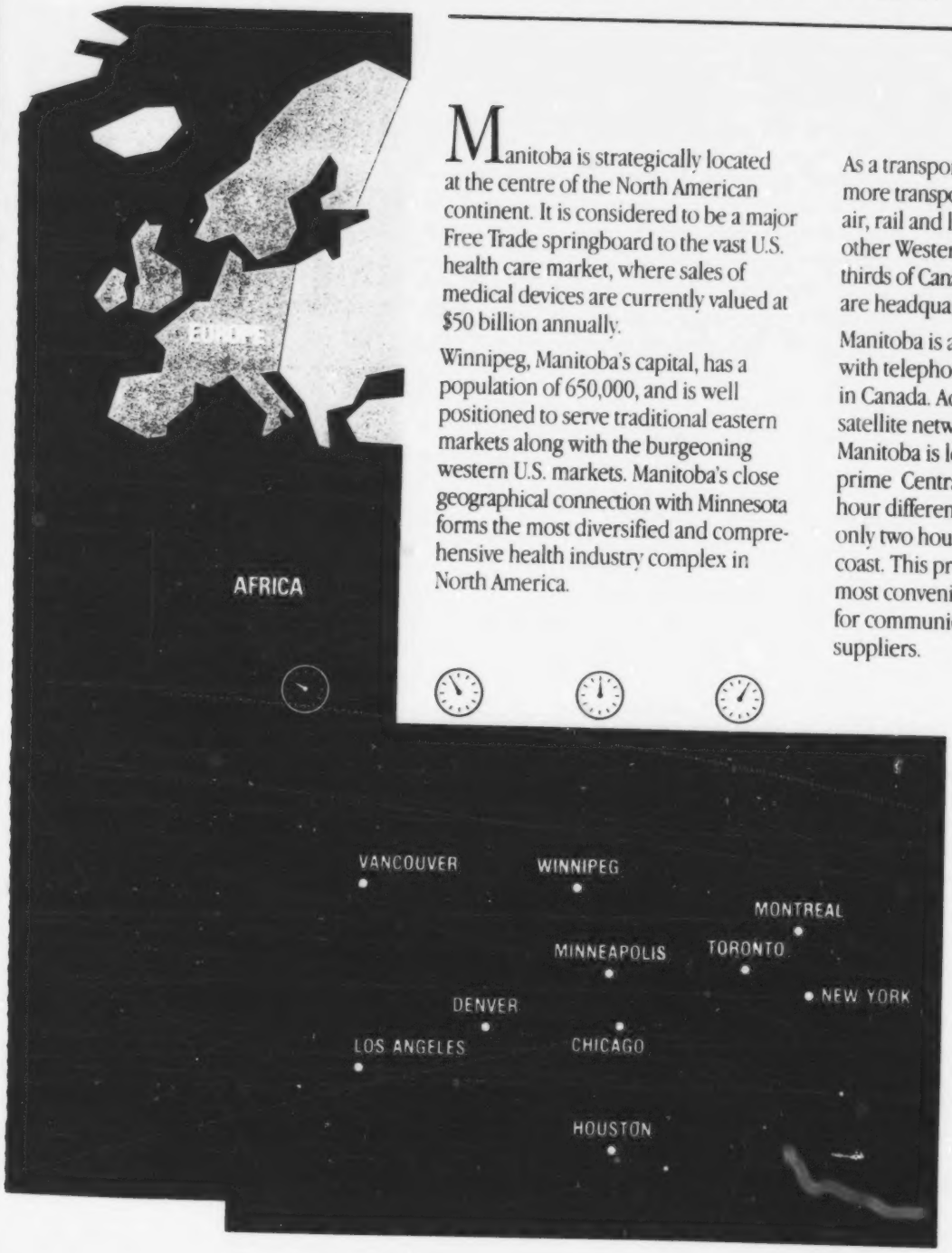
Manitoba, Canada's new Health Industry leader and Free Trade springboard to the vast U.S. health care market.

Manitoba has a rapidly growing health industry sector and it has become the #1 site for **new** health industry investments in Canada. Areas of focus are:

- Biotechnology
- Virology
- Pharmaceuticals
- Medical Products
- Aging and Rehabilitation
- Nutrition
- Health Care Information and Telecommunications
- Diagnostics
- Research and Development

Outstanding investment opportunities and a receptive environment are offered for health industries in Manitoba. The following showcase will demonstrate how your company can profit from the **Manitoba Advantage.**

CENTRAL ADVANTAGE



Manitoba is strategically located at the centre of the North American continent. It is considered to be a major Free Trade springboard to the vast U.S. health care market, where sales of medical devices are currently valued at $50 billion annually.

Winnipeg, Manitoba's capital, has a population of 650,000, and is well positioned to serve traditional eastern markets along with the burgeoning western U.S. markets. Manitoba's close geographical connection with Minnesota forms the most diversified and comprehensive health industry complex in North America.

As a transportation hub, Winnipeg has more transport terminals and facilities—air, rail and land combined—than any other Western Canadian centre. Two-thirds of Canada's national trucking firms are headquartered here.

Manitoba is a communication leader, with telephone rates among the lowest in Canada. Access to cable, cellular and satellite networks is readily available. Manitoba is located in North America's prime Central time zone, with only one hour difference to the eastern U.S. and only two hours difference to the west coast. This provides the broadest and most convenient continental time-frame for communicating with clients and suppliers.

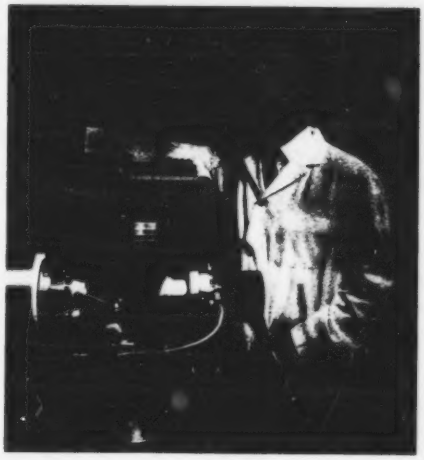
Manitoba's Central time zone is a prime advantage for health, science and business communications.

STRATEGIC ADVANTAGE

Manitoba anticipates changes in health care, whether they are driven by technological advances, demographics or the global perspective of business. The confidence to become a major player in this exciting environment has encouraged Manitoba to implement a focused, comprehensive long range plan, the five year Canada-Manitoba Health Industry Development Strategy.

This Strategy is the driving force behind Manitoba's aggressive health industry. All government levels attach high priority to research and development and to new health industry ventures. The business, scientific and academic communities are equally committed to this growth.

Manitoba has the expertise and resources to create, develop and adapt technology to make health industries competitive in the marketplace and world leaders in innovation and product design.



TECHNOLOGICAL ADVANTAGE

The established health technology infrastructure in Manitoba is extensive and new technology investments in excess of $500 million will be added through 1995.

The infrastructure includes:

- Canadian Centre for Disease Control Virology Laboratory
- Canadian Animal Virology Laboratory
- Canadian Aging and Rehabilitation Product Development Centre
- Canadian Health Telematics Inc.
- Regional Health Protection Laboratory
- Siemens/St. Boniface Hospital Imaging Centre
- Health Sciences Centre (Canada's largest integrated teaching/hospital complex)
- St. Boniface General Hospital Research Centre
- University of Manitoba Faculty of Medicine (over 400 health scientists)
- Biotechnology/Blood Fractionation Centres
  - —The Winnipeg Rh Institute
  - —ABI Biotechnology
- Unisys Canadian Health Computer Systems Centre
- Otto Bock Canada Orthotic Research and Development Centre

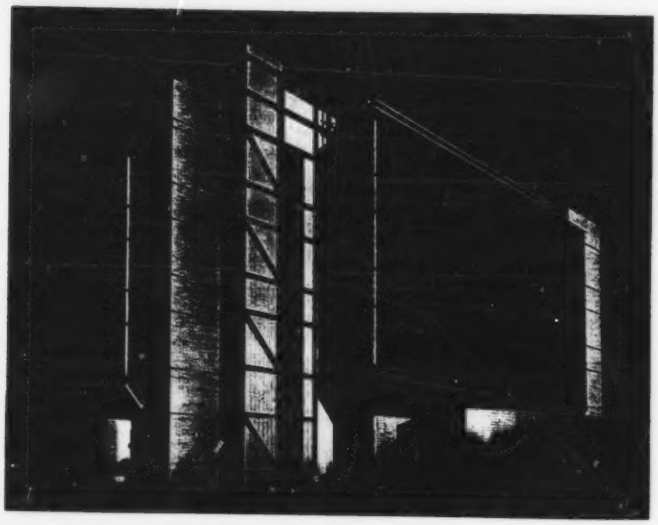
1. St. Boniface General Hospital Research Centre

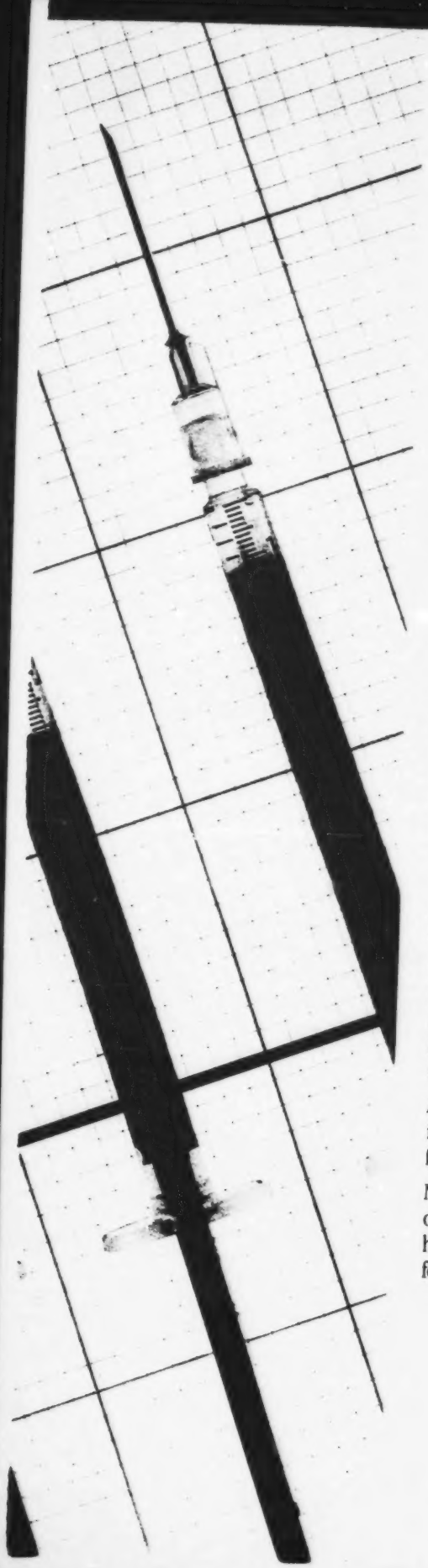
2. Canadian Institute for Industrial Technology

3. The Winnipeg Rh Institute

4. Regional Health Protection Laboratory

5. Manitoba Research Council—Food Technology Centre





PRODUCTION ADVANTAGE

Manitoba offers competitive capital cost advantages. Costs for industrial land, industrial space, office leasing, and operating are lower than in most North American centres.

The Manitoba workforce is stable and well-trained. Three universities and three technical colleges produce a continuing supply of technology oriented graduates.

Manitoba's growing and diversified manufacturing sector consists of approximately 1,800 companies, producing more than $6 billion worth of goods annually and employing more than 63,000 people. They offer health industries a wide range of production support in component supply and services.

Manufacturing capabilities include: transportation equipment, computers and parts, aerospace assemblies, metal fabrication, plastics, food and beverage, clothing and furniture.

A high proportion of Manitoba's health industry production provides products for international markets.

Manitoba generates an abundant supply of affordable hydro-electric energy and has an unlimited supply of fresh water for health product manufacturing.

THE LIFESTYLE ADVANTAGE

Manitobans enjoy one of the most affordable and pleasing lifestyles in North America. It is also a safe place to live and raise a family.

Multi-culturalism is a vibrant and stimulating part of life in Manitoba, with more than 40 different ethnic groups represented.

A vast, environmentally clean province, Manitoba offers clean air and 2,300 hours of bright sunshine a year with an average daytime high of 24C (76F) during June, July, August.

Clean fresh water is Manitoba's greatest natural resource. An extensive park system gives both residents and tourists alike the opportunity to enjoy numerous outdoor activities. Winnipeg alone has twenty-six golf courses, and more than 7,000 acres of parkland that includes over twenty miles of historic riverbank. Affordable housing is within easy access of a wide range of recreational opportunities.

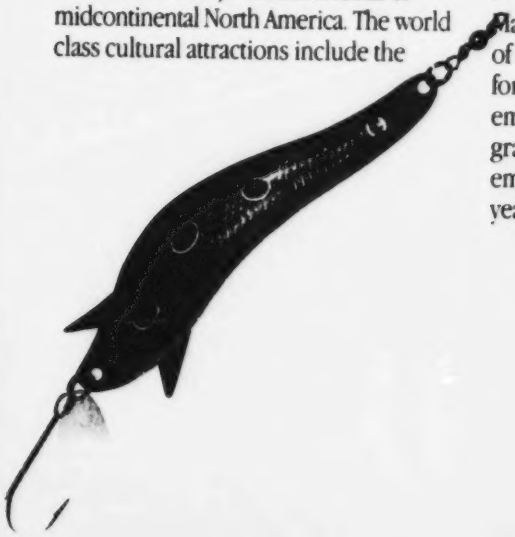
Manitoba is a major cultural focus of midcontinental North America. The world class cultural attractions include the Royal Winnipeg Ballet, the Manitoba Theatre Centre, the Winnipeg Symphony Orchestra, the Manitoba Opera Association, the Winnipeg Art Gallery, the Manitoba Museum of Man and Nature, and the Manitoba Planetarium.

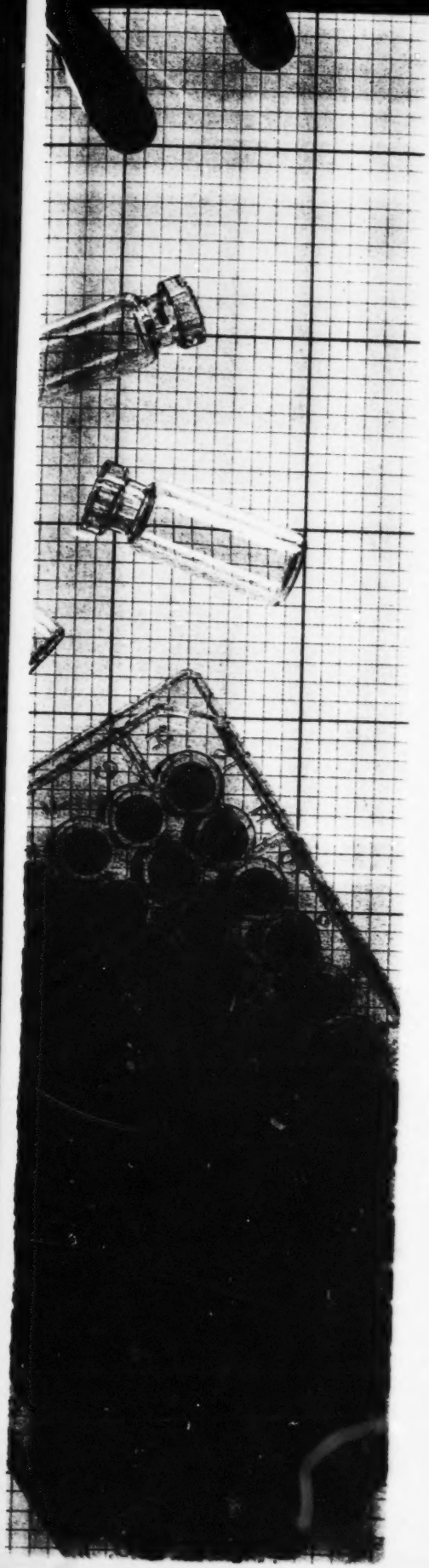
Winnipeg offers professional sports, including the Canadian Football League, the National Hockey League, the Canadian Soccer League, and thoroughbred and harness racing.

Manitoba's three universities and three major technical colleges represent an annual enrollment of some 70,000 students. Training programs are in place to supply a highly skilled workforce for the health industry sector.

The University of Manitoba is Western Canada's oldest academic institution. All major disciplines are represented with a special focus on medicine. The University receives government and private research funding and works closely with national research institutions in the province.

Manitoba's technical colleges have one of the highest success rates in Canada for matching training to provincial employment requirements. Surveys of graduates indicate 90 percent are employed in training-related jobs one year after graduation.





BIOTECHNOLOGY

Manitoba's biotechnology industry is characterized by excellence and innovation, and provides excellent opportunities for growth and expansion.

The two leading companies in the province, the Winnipeg Rh Institute and ABI Biotechnology, have developed international expertise in their fields.

The **Winnipeg Rh Institute Inc.** is a world leader in blood research and the production of plasma fractions. It boasts one of the most modern blood fractionation plants in the world.

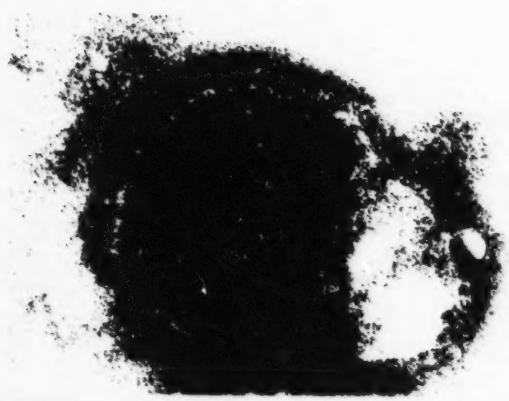
ABI Biotechnology Inc. concentrates on growth hormones and specialized products for the treatment of cancers and for use in organ transplants.

VIROLOGY

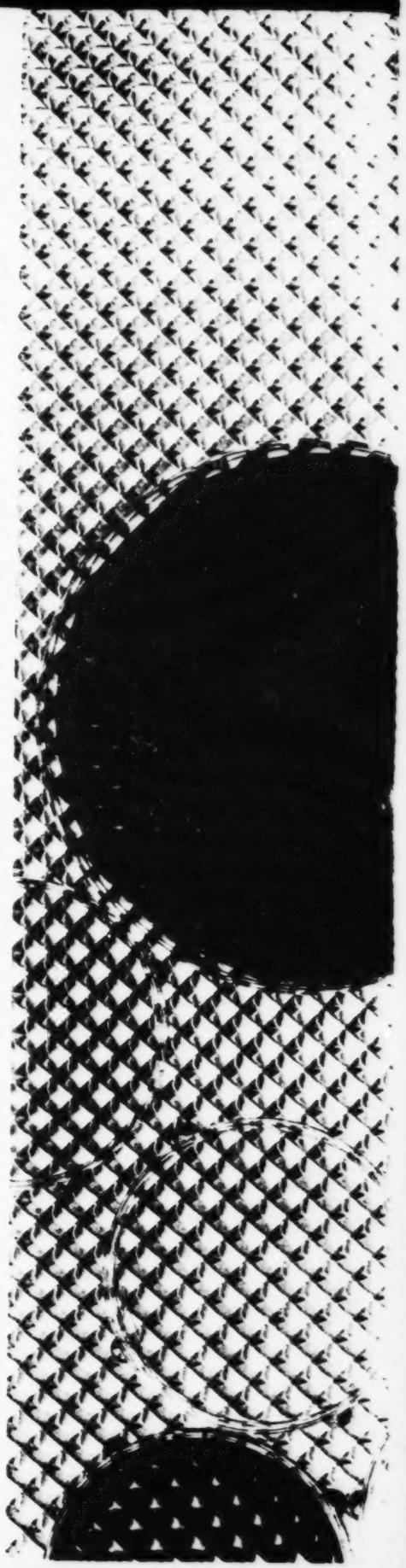
The Canadian government has announced two new high containment research laboratories. These new facilities will place Manitoba at the forefront of the important and specialized field of virology, which will give the province unique research capabilities in human and animal viral infections.

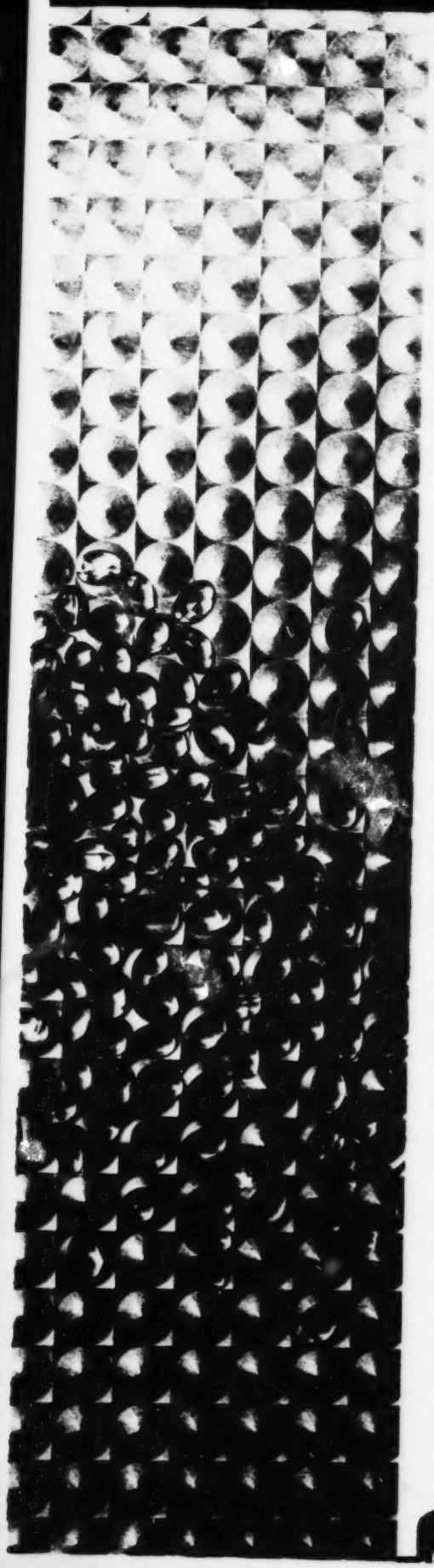
The **Canadian Centre for Disease Control Virology Laboratory**, expected to be in full operation by 1993, will provide maximum, level IV biological containment facilities. Focused areas are viral studies and microbiology. The lab will be one of only a very few such facilities worldwide.

Scheduled for completion in 1993, the new **Animal Virology Laboratory** will conduct research into improved techniques for identifying animal disease agents.



Herpes virus – mag. 300,000X





PHARMACEUTICALS

Pharmaceutical research, manufacturing and distribution are growing areas in the provincial economy, representing opportunity for entrepreneurs.

Manitoba's diversified technology infrastructure, strong medical research capabilities and skilled labour force are attractive to pharmaceutical firms looking for a highly productive and stable environment.

Westcan Pharmaceuticals, a Winnipeg-based company, manufactures natural vitamins, pharmaceuticals and analgesics for private label distribution.

Premarin, the leading natural estrogen product in the world, is manufactured in Manitoba by **Ayerst Laboratories**. It is Canada's largest-selling export pharmaceutical, sold in over 70 countries worldwide.

Export Packers Ltd. is the world's leading producer of Lysosyme, an anti-bacterial and food preservation agent for markets in Japan and Europe.

MEDICAL PRODUCTS

The foundation of Manitoba's medical products industry is already in place.

3M Canada Ltd., located in the town of Morden, is a producer of surgical masks, artificial ligaments, monitoring electrodes and surgical tape for markets in Canada, Europe and Australia.

Diagnostic Imaging Specialists Corporation, located in the town of St. Malo, is involved in the research, development and manufacture of radiological imaging equipment. These quality control devices and accessories are supplied to the Canadian and U.S. markets.

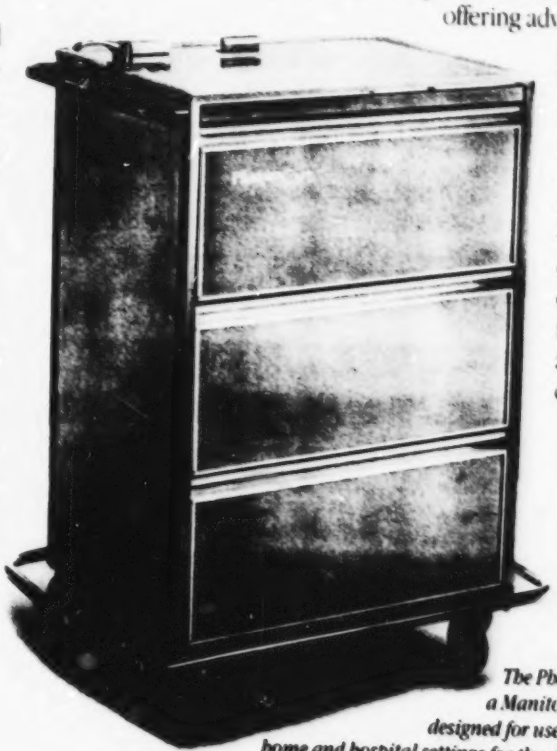
Manlab Instrumentation Ltd. specializes in servicing medical laboratory equipment and manufacturing microprocessor-based counters for haematology laboratories. They also do research and development into computer and electronic applications in health care equipment.

Manrex Limited manufactures and distributes medication delivery systems and accessories for the international health care market.

Medical product manufacturers can benefit from two major facilities in Manitoba, which offer in-depth resources to assist in the healthy operation of the physical plant.

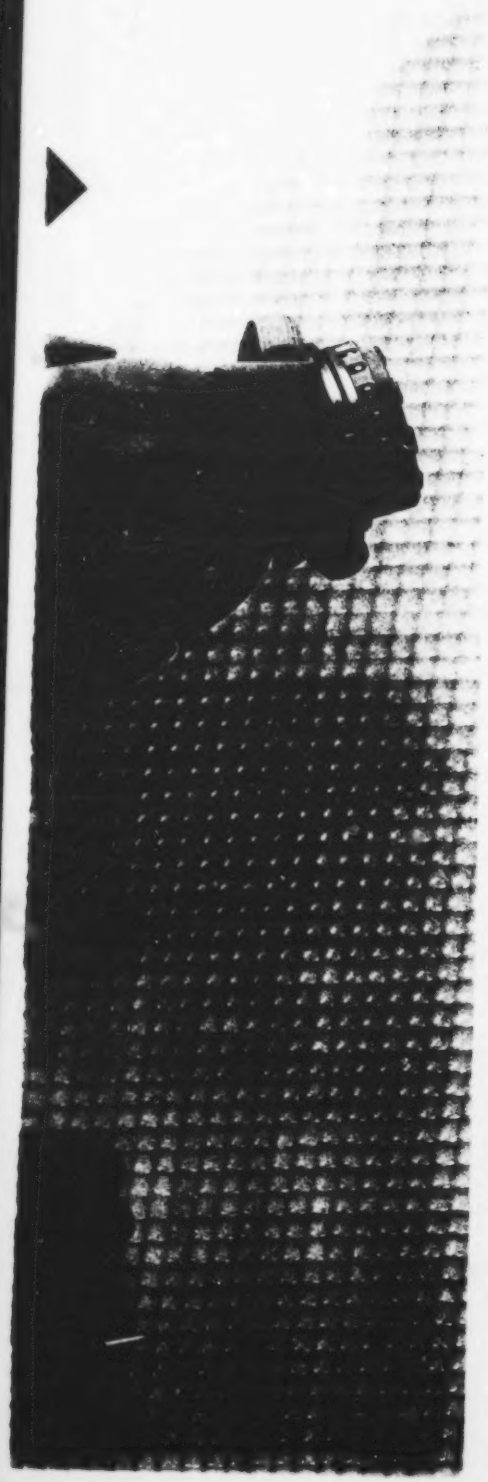
The **Canadian Institute for Industrial Technology** promotes co-operative research in industrial automation, with a strong interest in health care.

The **Manitoba Research Council's Technology Centre** is a full service product development and testing facility offering advice to health industries in the areas of mechanical and electronic engineering, environmental and analytical chemistry.



The Pharmacart is a Manitoba product designed for use in nursing home and hospital settings for the efficient and secure handling of medications by nursing staff.

AGING AND REHABILITATION



Research into the needs of the aging is a critical focus as our population matures. The development of products serving the elderly is important for the health and well-being of seniors. Manitoba's expertise in the area of aging and rehabilitation provides a competitive edge for businesses in this fastest growing health care market segment.

The **Canadian Aging and Rehabilitation Product Development Centre** is a joint venture of the governments of Manitoba and Canada. It includes a showcase of state-of-the-art products designed for the elderly and those with disabilities. New product testing and development is an important function of the facility.

Applied research into health care and aging from a social perspective is carried on at the **University of Manitoba Centre on Aging**.

Several Manitoba firms are notable for their manufacture of goods for the aging and rehabilitation market:

Otto Bock Orthopedic Industry of Canada Ltd. is a world leader in the manufacture of prosthetic and orthotic devices. Products exported worldwide include a full line of prosthetic devices and a new line of adaptive seating for the severely disabled.

Westnofa is a leader in the design and manufacture of furniture for the health industry, including specialty seating, tables, case goods and pediatric furniture for the North American market.

North Associates Canada Ltd. manufactures private label products for companies in Canada and the United States. These include creams, ointments, lotions, shampoos and disinfectants for institutional care use.

The Paratracker wheelchair, designed and produced in Manitoba, is providing new freedom for the disabled with its 'all-terrain' mobility capability.

NUTRITION

The emerging role of nutrition in promoting wellness and quality of life can be viewed as a means of reducing present and future overall health care costs. Manitoba's capabilities in developing new food products and consumer testing their acceptance, makes it an ideal location for new research and development in nutrition.

Manitoba Research Council—Food Technology Services provide small and medium-sized firms with sophisticated technical and information resources to aid in the development of food products, from idea to market; including processing, packaging, food chemistry and pilot plant capability.

The **University of Manitoba** adds extensive capability in working with industry to develop and test new food products through the departments of Food Sciences and Human Ecology. The Food Sensory Laboratory works with industry to develop and test new food products.

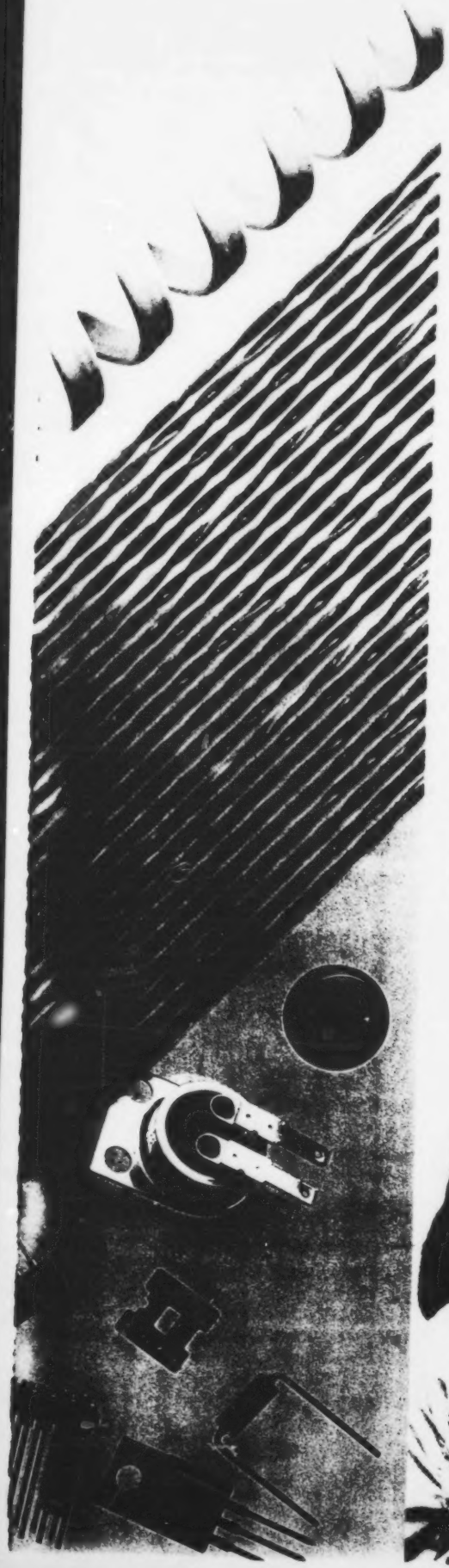
New levels of care are being realized at ***The Wellesley****, where a total 'lifestyle' option for senior is provided. Accommodations, dietary needs, recreation and wellness councilling are available to its residents.*

HEALTH CARE INFORMATION AND COMMUNICATION

Information exchange is critical in the health care field. Manitoba is developing cutting-edge capabilities in this area, with emerging communication technologies providing innovative approaches to health care in remote communities.

Telecommunications industries are encouraged by the **Canadian Health Care Telematics Inc.** to develop products which will serve the health care industry. Examples of such products are knowledge based systems, home care voice response systems and remote sensing.

Unisys Canada Inc. has established their Canadian Health Computer Systems Centre in Winnipeg to develop software for health care applications and hospital management.



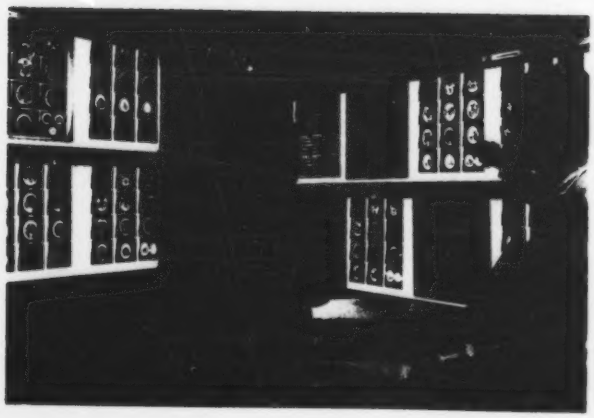
DIAGNOSTICS

Imaging technology is assisting in the diagnosis of a wide range of diseases. Advances in new imaging technology are being developed in Manitoba.

Siemens/St. Boniface Hospital Imaging Centre conducts research in magnetic resonance imaging and spectroscopy, with the capability to access, via satellite, the Siemens research facilities in the U.S. and in West Germany.

This major facility, with its 'link-up' capabilities, will help Manitoba researchers to develop further advances in diagnostic research applications of magnetic resonance imaging technology.

Health Sciences Centre conducts an In Vivo Nuclear Imaging Program—the integration of technology, industry and medicine in a combined effort in the treatment of neurological disorders.



RESEARCH AND DEVELOPMENT

Manitoba has a highly qualified core of researchers in the treatment of disease and in the development of products for the health industry. The synergy they create offers significant potential for health technology transfer.

The **University of Manitoba Faculty of Medicine** is internationally renowned for research in the neurosciences, cardiovascular sciences, pharmacology, endocrinology, immunology and medical imaging. The faculty is affiliated with two teaching hospitals, which represent over 2,000 beds.

St. Boniface General Hospital Research Centre is a leading-edge facility conducting basic and applied medical research, focused in the areas of heart and lung disease, cell biology and cancer, and the neurosciences.

The **Health Sciences Centre Research Foundation** has helped Manitoba researchers become leaders in the neurosciences and in spinal cord damage. Major research is conducted into nerve damage, paraplegia, quadraplegia, epilepsy, multiple sclerosis, spinobifida, stroke, and Alzheimer's disease.

Research into children's diseases is carried on by the **Children's Hospital Research Foundation**. Researchers here have world-class expertise in the treatment of new-borns, endocrinology, respiratory diseases, disorders of the blood, tumors in childhood, genetics and child development.

Located near the town of Pinawa, the **Whiteshell Nuclear Research Establishment**, a division of Atomic Energy of Canada Ltd., combines professional skills and state-of-the-art facilities with applications for commercial enterprises seeking to develop occupational/environmental health technologies and products. This includes a consulting service on the sterilization of products by radiation to assist manufacturers of medical products and medical disposables.

The **Regional Health Protection Laboratory of Health and Welfare Canada** is responsible for testing foods, drugs, medical devices, and cosmetics to ensure they meet federal government health standards. Opportunity exists for manufacturers to work closely with this agency, early in the product development cycle.

TAKE ADVANTAGE

Economic Development Strategy

The five year Canada-Manitoba Health Industry Development Strategy is the driving force behind Manitoba's health industry sector.

All government levels are working together in creating a high growth environment which welcomes and strongly supports new health industry ventures.

The government of Manitoba pursues a policy of sustainable development and economic growth, creating a beneficial climate for new, expanding or existing health care companies.

The province offers dedicated support programs designed to assist businesses in the health sector. Programs are available to assist companies in assessing the viability of projects in the province. These include feasibility, site location and technical studies related to specific projects.

Western Diversification Initiative

In 1987 the government of Canada introduced the $1.2 billion Western Diversification Initiative. It is an investment fund designed to encourage sustained and stable industrial growth in Western Canada, with a focused interest in the health industry sector.

MAKE THE MANITOBA ADVANTAGE YOURS

If your company is looking for a cost-competitive health industry site, with a high technology oriented economy in which to invest, or a base for new North American operations; look seriously at Manitoba, Canada.

The opportunity is here to connect with Manitoba's aggressive health care industry. Possibilities exist in new technologies, joint ventures, partnerships, technology transfers and new North American manufacturing plants.

Manitoba offers an integrated approach to health industry development, providing solutions to market access, clinical testing and regulatory considerations.

With a diverse economy, practical support and incentives that make sense, and a growth-oriented environment, Manitoba has the foundation, the programs and the attitude to do business in today's fast-paced market.

Promising investment opportunities and a receptive environment for health industries—the MANITOBA ADVANTAGE.

Contact:
Health Industries Development Initiative
Manitoba Industry, Trade and Tourism
500-155 Carlton Street
Winnipeg, Manitoba, Canada R3C 3H8
Telephone: (204) 945-7240
Fax No.: (204) 957-1193
Telex No.: 07-587833